

IN THE CLAIMS

Claim 22 has been amended. Claim 25 has been added. The following represents a listing of all claims:

- 1-4. (cancelled)
5. (withdrawn) A method for performing an enzyme reaction using an aldehyde compound as a substrate, which comprises removing a carboxylic acid compound contained in an aldehyde compound by subjecting the aldehyde compound to an alkaline treatment before starting the enzyme reaction.
6. (withdrawn) A method for performing an enzyme reaction using an aldehyde compound as a substrate, which comprises reducing a carboxylic acid compound content in the aldehyde compound to 0.1 wt % or less by subjecting the aldehyde compound to an alkaline treatment before starting the enzyme reaction.
7. (withdrawn) A method according to claim 5, wherein the alkaline treatment comprises mixing the aldehyde compound with an alkaline aqueous solution and then separating the aldehyde compound from the aqueous phase.
8. (withdrawn) A method according to claim 6, wherein the alkaline treatment comprises mixing the aldehyde compound with an alkaline aqueous solution and then separating the aldehyde compound from the aqueous phase.

9. (withdrawn) A method according to claim 5, wherein the enzyme reaction is the synthesis of an optically active cyanohydrin from the aldehyde compound and hydrogen cyanide in the presence of hydroxynitrile lyase as a catalyst.

10. (withdrawn) A method according to claim 6, wherein the enzyme reaction is the synthesis of an optically active cyanohydrin from the aldehyde compound and hydrogen cyanide in the presence of hydroxynitrile lyase as a catalyst.

11. (withdrawn) A method for enzymatically producing an optically active cyanohydrin from a carbonyl compound and prussic acid containing an acidic substance as a stabilizer, said prussic acid providing an aqueous phase with pH 5 or less when dissolved at a concentration of 1.5 M in an organic solvent substantially immiscible with water, mixed with pure water at such a ratio that the mixture separates into organic and aqueous phases, and then allowed to stand, wherein said method comprises:

subjecting said prussic acid to a treatment for reducing inhibitory effect of the stabilizer on an enzyme; and

performing an enzyme reaction to synthesize the optically active cyanohydrin using the treated prussic acid.

12. (withdrawn) A method for enzymatically producing an optically active cyanohydrin from prussic acid and carbonyl compound, which comprises:

dissolving prussic acid in an organic solvent substantially immiscible with water to give an organic solution of prussic acid;

adding a buffer to this solution in a saturation amount or more;

mixing;

collecting the organic phase; and

performing an enzyme reaction to synthesize the optically active cyanohydrin using the organic phase as prussic acid.

13. (withdrawn) The method according to claim 12, wherein the buffer has buffering ability in a range of pH 4 to pH 7.

14. (withdrawn) The method according to claim 11, wherein the enzyme reaction is catalyzed by hydroxynitrile lyase.

15. (withdrawn) The method according to claim 12, wherein the enzyme reaction is catalyzed by hydroxynitrile lyase.

16. (withdrawn) A method for enzymatically producing an optically active cyanohydrin from prussic acid and carbonyl compound, which comprises:

performing distillation of a reaction solution after completion of an enzyme reaction to separate and collect unreacted prussic acid and organic solvent therefrom; and

repeatedly using the collected prussic acid and organic solvent at least once.

17. (withdrawn) The method according to claim 16, wherein the reaction solution after completion of an enzyme reaction is obtained from the method according to claim 1.

18. (withdrawn) The method according to claim 16, wherein the reaction solution after completion of an enzyme reaction is obtained from the method according to claim 5.

19. (withdrawn) The method according to claim 16, wherein the reaction solution after completion of an enzyme reaction is obtained from the method according to claim 6.

20. (withdrawn) The method according to claim 16, wherein the reaction solution after completion of an enzyme reaction is obtained from the method according to claim 11.

21. (withdrawn) The method according to claim 16, wherein the reaction solution after completion of an enzyme reaction is obtained from the method according to claim 12.

22. (currently amended) A method for producing an optically active cyanohydrin comprising:

adding hydrogen cyanide and either water or an aqueous buffer to dissolving prussic acid
~~in an unsaturated~~ organic solvent that is substantially immiscible with water to form an organic solvent which comprises hydrogen cyanide and is saturated with water comprising prussic acid;

~~saturating the organic solvent comprising prussic acid with water or aqueous buffer to form a saturated organic solvent comprising prussic acid;~~ and

forming a reaction composition comprising an immobilized hydroxynitrile lyase having a water content of 10 % or more by weight, and a liquid comprising a carbonyl compound and the ~~saturated organic solvent comprising~~ which comprises hydrogen cyanide and is saturated with water prussic acid, wherein the liquid is a uniform liquid phase without phase separation.

23. (previously presented) The method of claim 22, wherein the immobilized hydroxynitrile lyase is immobilized on a carrier that is capable of retaining water.

24. (previously presented) The method of claim 22, wherein the liquid is saturated with water or aqueous buffer sufficient to prevent release of water from the immobilized hydroxynitrile lyase.

25. (new) The method of claim 22, wherein the organic solvent which comprises hydrogen cyanide and is saturated with water, is formed by adding hydrogen cyanide to the organic solvent that is substantially immiscible with water, and saturating the organic solvent comprising hydrogen cyanide with water or an aqueous buffer.